

Notice of Allowability	Application No.	Applicant(s)	
	10/014,290	MIN ET AL.	
	Examiner	Art Unit	
	Jeanne A. Di Grazio	2871	<i>sw</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment of 3 February 2004.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ The drawings filed on 10 December 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☒ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

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DETAILED ACTION

Allowable Subject Matter

Claims 1-14 are allowed.

The following is an examiner's statement of reasons for allowance:

As to claim 1, relevant prior art of record did not disclose, alone or in combination, a liquid crystal display (LCD) and fingerprint capture panel having both a data display function and a fingerprint capture function, comprising: a liquid crystal display part and a light-sensing fingerprint capture sensor arranged on the same plane, the liquid crystal display part and the light-sensing fingerprint capture sensor being simultaneously arranged through the same manufacturing process and a backlight used as a light source for the liquid crystal display part and the fingerprint capture sensor.

The above limitations result in a novel fingerprint reading device and fingerprint capture sensor incorporating liquid crystal technology.

The closest combination is United States Patent 6,327,376 B1 (to Harkin) in view of United States Patent 6,401,551 B2 (to Kawahara et al.). Neither Harkin nor Kawahara fairly teaches or suggests an optical fingerprint capture sensor and in combination with Applicant's other recited limitations.

As to claim 5, relevant prior art of record did not disclose, alone or in combination, a liquid crystal display (LCD) and fingerprint capture panel having both a data display function and a fingerprint capture function, comprising: a backlight, a thin film transistor (TFT) panel

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attached to a top of the backlight, the TFT panel including an liquid crystal display part formed in a region of the TFT panel and a fingerprint capture part formed in the remaining region of the TFT panel, a liquid crystal element attached only to a top of the liquid crystal display part of the TFT panel, and a color filter attached only to a top of the liquid crystal element.

The above limitations result in a novel fingerprint reading device and fingerprint capture sensor incorporating liquid crystal technology.

The closest combination is United States Patent 6,401,551 B2 (to Kawahara et al.) in view of WO-01/69520A2 (to Lan) and further in view of United States Patent 6,501,529 B1 (to Kurihara et al.). None of theses references, however, fairly teach or suggest a fingerprint capture sensor that requires a backlight and in combination with Applicant's other recitations.

Specifically, Kawahara discloses an electrostatic capacity type fingerprint reading sensor and does not require a backlight for its operation.

As to claim 10, relevant prior art of record did not disclose, alone or in combination, a liquid crystal display (LCD) and fingerprint capture panel having both a data display function and a fingerprint capture function, comprising: a backlight, a thin film transistor (TFT) panel attached to a top of the backlight and including a liquid crystal display part formed in a region of the TFT panel, a liquid crystal element attached to a top of the liquid crystal display part of the TFT panel, and a color filter attached to a top of the liquid crystal element and extended to cover a region in which the liquid crystal display part is not formed, and a fingerprint capture part formed on a region of the color filter covering the region in which the liquid crystal display part is not formed.

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The above limitations result in a novel fingerprint reading device and fingerprint capture sensor incorporating liquid crystal technology.

The closest combination is United States Patent 6,401,551 B2 (to Kawahara et al.) in view of WO-01/69520A2 (to Lan) and further in view of United States Patent 6,552,764 B2 (to Fujioka et al.). None of these references, however, fairly teach or suggest a fingerprint capture sensor that requires a backlight and in combination with Applicant's other recitations. Specifically, Kawahara discloses an electrostatic capacity type fingerprint reading sensor and does not require a backlight for its operation.

As to claims 2-4, 6-9, and 11-14, they are directly or indirectly dependent upon claims with allowable subject matter above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (571)272-2289.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeanne Andrea Di Grazio

Patent Examiner
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Robert Kim, SPE

A handwritten signature in black ink, appearing to read 'DUNG T. NGUYEN', with a long horizontal flourish extending to the right.

DUNG T. NGUYEN
PRIMARY EXAMINER